CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 87-137

NPDES NO. CA0028878

REISSUING WASTE DISCHARGE REQUIREMENTS (ORDER NO. 85-119) FOR:

PRECISION MONOLITHICS, INC.
SPACE PARK DRIVE FACILITY
SANTA CLARA
SANTA CLARA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter called the Board) finds that:

1. Precision Monolithics, Inc., hereinafter called the discharger, by application dated June 19, 1987, has applied for modification, and has consented to reissuance, of waste discharge requirements and a permit to discharge waste under the National Pollutant Discharge Elimination System (NPDES).

2. The discharger owns and operates an integrated circuits manufacturing facility located at 1500 Space Park Drive in the City of Santa Clara, Santa Clara County, approximately 1/2 mile southeast of the intersection of Route 101 and Montague Expressway.

3. Investigations initiated in January 1983 detected various volatile organic chemicals (VOCs), including trichloroethane, trichloroethylene, dichloroethylene, and benzene derivatives, in groundwaters beneath the facility.

4. The discharger presently extracts approximately 70,000 gallons per day (gpd) of groundwater containing volatile organic chemicals which is treated by airstripping prior to discharge to the storm sewer. The discharge is regulated by Waste Discharge Requirements, Order No. 85-119 (NPDES CA0028878).

5. As of December 1986, discharger studies indicated that the groundwater contamination extended vertically to a depth of approximately 40 feet and horizontally a distance of about 1000 feet downgradient from the discharger's property line. The highest concentration of trichloroethylene detected in recent sampling in the site vicinity exceeded 1000 parts per billion.

6. Remedial actions to date include removal of two solvent waste tanks, an acid neutralization tank, and installation of an onsite groundwater extraction system. The discharger seeks to remediate and prevent the migration of offsite volatile organic chemicals by expansion of the existing groundwater extraction system.

7. Waste 001 consists of up to 175,000 gallons per day (gpd) of groundwater which will be treated by packed tower air stripping to remove VOCs prior to discharge to a storm sewer that discharges to the Guadalupe River and then to South San Francisco Bay. During storm events, large flows which exceed the capacity of the storm sewer can overflow to an alternate storm sewer which discharges to San Tomas Aquino Creek.

8. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on December 17, 1986. The Basin Plan contains water quality objectives for South San Francisco Bay, and contiguous surface and groundwater.

9. The beneficial uses of the Guadalupe River include:

   - Contact and non-contact water recreation
   - Warm fresh water and cold fresh water habitat
   - Wildlife habitat
   - Fish Migration and spawning

10. The beneficial uses of South San Francisco Bay include:

    - Contact and non-contact water recreation
    - Wildlife habitat
    - Preservation of rare and endangered species
    - Estuarine habitat
    - Fish spawning and migration
    - Industrial service supply
    - Shellfishing
    - Navigation
    - Ocean commercial and sport fishing

11. The basin Plan prohibits discharge of wastewater which has "particular characteristics of concern to beneficial uses" (a) "at any point in San Francisco Bay south of the Dumbarton Bridge" and (b) "at any point where the wastewater does not receive a minimum initial dilution of at least 10:1 or into any nontidal water, deadend slough, similar confined water, or any immediate tributary thereof."

12. The basin Plan allows for exceptions to the prohibitions referred to in Finding 10 above when it can be demonstrated that a net environmental benefit can be derived as a result of the discharge.

13. Exceptions to the prohibitions referred to in Finding 10 are warranted because the discharge is an integral part of a program to clean up contaminated groundwater and thereby produce an environmental benefit, and because receiving water concentrations are expected to be below levels that would effect beneficial uses. Should studies indicate chronic effects, not currently anticipated, the Board will review the requirements of this Order pursuant to section B.1.e.

14. The basin Plan prohibits discharge of "all conservative toxic and deleterious substances, above those levels which can be achieved by a program acceptable to the Board, to waters of the Basin." The discharger's groundwater extraction and treatment system and associated operation, maintenance, and monitoring plan constitutes an acceptable control program for minimizing the discharge of toxicants to waters of the State.

15. Effluent limitations of this Order are based upon the Basin Plan, State plans and policies, U.S. Environmental Protection Agency guidance, and best engineering judgment as to best available technology economically achievable.

16. The issuance of waste discharge requirements for this discharge is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.

17. The Board has notified the discharger and interested agencies and persons of its intent to issue waste discharge requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

18. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that Order No. 85-119 is modified as follows:

1. Effluent limitation A.1 is revised to read as follows:

" Constituent	Units	Instantaneous Maximum
Trichloroethylene	mg/L	0.005
1,1,1-trichloroethane	mg/L	0.005
1,1-dichloroethane	mg/L	0.005
1,2-dichloroethylene	mg/L	0.005
dichlorobenzenes*	mg/L	0.005

*Includes ortho, meta, para isomers"

2. Receiving water limitation B.2.b is revised to read as follows:

"b. pH:	The pH shall not be depressed below 6.5 nor raised above 8.5, nor caused to vary from normal ambient pH levels by more than 0.5 units."

3. Provision C.4 is revised to read as follows:

"The discharger shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated December 1986, except items A.10, B.2, B.3, C.8, and C.11."

4. Provision C.5 of Order No. 85-119 is revised to read as follows:

"This Order expires October 21, 1992. The discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements."

I, Roger B. James, Executive Officer do hereby certify the foregoing is a full, true and correct copy of an order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on October 21, 1987.

Roger B. James
Executive Officer

Attachments:

Standard Provisions & Reporting Requirements, dated December 1986
Revised Self-Monitoring Program
Site map

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

R E V I S E D

SELF-MONITORING PROGRAM

FOR

PRECISION MONOLITHICS, INC.

SPACE PARK DRIVE FACILITY

SANTA CLARA, SANTA CLARA COUNTY

NPDES NO. CA0028878

ORDER NO. 87-137

CONSISTS OF

PART A: Dated December 1986 and modified January 1987, including Appendices A through E

PART B: Adopted October 21, 1987

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT

Stations	Description
I-1	At a point in the groundwater extraction/treatment system immediately prior to treatment.

B. EFFLUENT

Stations	
E-1	At a point in the groundwater extraction/treatment system immediately following treatment.

C. RECEIVING WATERS

C-1	At a point in the Guadalupe River at least 100 feet but no more than 200 feet down-stream from the storm sewer discharge point.

II. SCHEDULE OF SAMPLING AND ANALYSIS

A. The schedule of sampling and analysis shall be that given in Table I.

III. MISCELLANEOUS REPORTING

If any chemical additives are proposed to be used in the operation of the treatment system they shall be reported and approved 30 days prior to their use.

IV. MODIFICATION TO PART A

A. Deletions:

Delete Sections D.2.e, D.2.g, D.3.b, E.1.e, E.1.f, E.3, and E.4.

G.4.e.1 Influent and Effluent Data Summary Reports shall be submitted only to the Regional Board Executive Officer, not to the EPA.

B. Modifications:

D.2.d is changed to read as follows:

If two consecutive samples monitored on a monthly basis in a 30 day period exceed the 0.005 mg/L effluent limitation for each volatile organic compound by more than 0.005 mg/l, or exceed the pH or toxicity effluent limit, the sampling frequency shall be increased to at least weekly until the additional sampling shows that the most recent three samples are in compliance.

G.2 Compliance with this section will not be required only if the effluent limitation of 0.005 mg/L instantaneous maximum for each volatile organic compound is not exceeded by more than 0.005 mg/L.

In accordance with this section, the discharger shall be required to accelerate his monitoring program to analyze the discharge at least once a week, not once a day.

G.4 Written reports under G.4 shall be filed each calender quarter, once in January, April, July, and October.

G.4.b The report format shall be prepared in a format acceptable to the Executive Officer. The example in Appendix A is provided as guidance.

G.4.e The report format will be prepared in a format acceptable to the Executive Officer. NPDES Discharge Monitoring Report, EPA Form 3320-1, is provided as guidance.

G.4.d The report format shall be prepared in a format acceptable to the Executive Officer. The example in Appendix B is provided as guidance.

G.5 By January 30 of each year, the discharger shall submit, in place of the quarterly report, an annual report to the Regional Board covering the previous year.

V. MODIFICATIONS TO STANDARD PROVISIONS AND REPORTING REQUIREMENTS

1. Delete the following phrase from Provision A.5:

"(1) that they have begun or expect to begin, use or manufacture of a pollutant not reported in the permit application,"

2. Delete the following phrase from Provision B.1:

" Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures."

3. Provision C.10 (c) is changed to read as follows:

"The Regional Board Executive Officer may waive the above required report on a case by case basis."

I, Roger B. James, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 85-119 and revised by Order No. 87-137.

2. Was adopted by the Board on October 21, 1987.

3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer or Regional Board.

ROGER B. JAMES
EXECUTIVE OFFICER

Attachment: Table I

T A B L E 1

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	I-1		E-1		C-1	
Type of Sample	G		G		G	
Flow Rate (Gal/Day)	D		D			
BOD, 5-day, 20 C, or COD (mg/l)						
pH (units)			M		2/Y	
Dissolved Oxygen (mg/l and % Saturation)					2/Y	
Temperature (C)					2/Y	
Total Suspended Solids (mg/l)						
Fish Tox'y 96-hr. TL % Surv'l in undiluted waste			Y			
GC/MS Scan (EPA 624) (mg/l)			Y			
Volatile Chlorinated (1) Hydrocarbons (mg/l)	M		M		2/Y	
Stoddard Solvent (mg/l)			Y			

LEGEND FOR TABLE

G = Grab Sample
D = Once each day
M = Once each month
Q = Quarterly, once in March, June, September, and December
2/Y = Once in March and September
M*= Weekly for the first three (3) months of startup of operation; reduced to once a month thereafter.
Y = Once a year

(1) Defined as trichloroethylene, 1,1,1-trichloroethane, 1,2-Dichloroethylene, 1,1-dichloroethane, and dichlorobenzenes.